VIRGINIA WILDLIFE

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Family camping is popular in Virginia in July.

National Park Service Photo

VIRGINIA WILDLIFE

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A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting, Fishing and Outdoor Recreation in Virginia

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This unburied victim of the Atlantic's fury is but one of the hundreds of deteriorating wrecks which lie at the edge of the waves along the Virginia-Carolina coast. (National Park Service Photo)

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Why Bother About Wildlife?

CAN we do without wild creatures? Is wildlife essential to our day to day existence? Is it necessary that we maintain wild animal populations in the face of an ever-increasing human population? Is wildlife conservation really worth all the effort we are putting into it? Do the people want it?

These are some profound questions facing modern wildlife conservationists today. They are questions worth thinking about.

In the humble opinion of your editor, we surely must have wild creatures in our environment or we are lost. I believe we want wildlife in America for several reasons—for the reason that it affords recreation to millions of people, that it provides a very substantial economic return to many others, and, above all, because it is a valuable heritage and an expression of a national house in good order. Wildlife flourishes where man has succeeded in adapting himself to the land in which he lives and where he has attained a degree of bountiful living. Wild birds and mammals are not abundant where man and the land are not in harmony, where man must use the land so intensively as to extract every last talent from it.

The conservation of wildlife in America is no luxury, any more than the conservation of our soil is a luxury. We might do without topsoil, but only as we are willing to accept a low standard of enjoyment and a precarious future. We could do with less wildlife, but we would be a poorer nation as a result. Hunting, fishing, the profit in the till from the wildlife harvest, the esthetic appreciation of wild creatures by those who neither kill nor profit—all these things are traditional in America. Yet none of these things, in themselves, so convinces us of the value and necessary of wild animals as the knowledge that without them something would be fundamentally wrong, seriously out of order. We want wildlife not only for its immediate usefulness, but also for the part it has played in our civilization and the influence it exerts upon us and the whole environment around us.

Yes, wildlife, like all of its other related natural resources, is worth bothering about and those in wildlife management must share in the satisfactions and frustrations that go with the job. Those in wildlife management must share with other interested conservationists the great task that lies ahead—the task of generating and guiding the ethic of the individual—be he farmer, sportsman, businessman, teacher, professional—to "live correctly and prudently" and with sensitivity in our natural environment, which is true conservation.

No, we cannot do without things natural, and wild creatures are *natural*. As Stafford King once said:

> *Give to man fresh air, and a glimpse of the sun, the scent of the pines, the glint of a wooded lake at eventide; give him the freedom of the forest and an intimate kinship with the kindred of the wild; let him know the lift of the paddle, the thrill of a well-aimed shot, the tug of a silken line; teach him the humility of the cedar, the cleanliness of the birch, the dignity of the pine; let him learn the true sportsmanship of the wilderness, where Nature stands honest and square—without deception, without anger against him, and, even so, still with him—and you have swept his mind clean of the sordid worries of existence. You have brightened his eye, straightened his shoulders, and sharpened all his faculties. You have made a better, healthier and happier citizen of him and of all his people.*
>
> —J. J. S.

R. E. L. Gildea, Jr. (right), senior at Lane High School, Charlottesville, receives highest contest award from Attorney General Harrison, acting in Governor Almond's absence.

OUR WILDLIFE RESOURCE: Its Value and Conservation

By R. E. LEE GILDEA, JR.

Cobham, Virginia

($400 scholarship winner, 11th Annual Wildlife Essay Contest)

WHEN Captain John Smith's little band of Colonists disembarked from their tiny vessels one day over three hundred and fifty years ago, they stepped into a world completely different from the hustling cities and quiet farmlands of their native England. Before them stretched a strange, wild land, where dense forests rolled down to the streams and rivers, whose smooth surfaces were marred only when a flock of waterfowl rose before the ships. How far this wilderness extended they had no way of knowing, or even imagining. They knew only that this bountiful land was to be their home.

The first few years at Jamestown were hard, chiefly because of the poor location of the settlement and the lack of resourcefulness of the settlers. Crops failed, provision ships did not appear, and fevers and famine took many lives. In fact, had it not been for the great abundance of wildlife during those first few years, it is doubtful that the little group at Jamestown would have survived at all. At length, however, the tiny Jamestown settlement took hold, grew, and in time prospered and spread until it joined with other similar colonies to become the great United States of America.

Suppose that today, three hundred and fifty years later, John Smith could again return to the shores of Virginia. I wonder what he would think, how he would feel. Certainly he would be astounded, amazed beyond measure at the change from the wilderness he knew. Certainly he would be proud to have helped in founding such a great nation. And yet, I do not doubt that he would be dismayed to see that progress, in making such great advances, has inevitably been destructive in some respects, notably toward wildlife.

When John Smith landed, he found Virginia inhabited by the Indians, whose villages were but tiny clearings in the vast forests. They lived side by side with the wild creatures, hunting and fishing for their living, accepting the good years and the lean, for they, along with the beasts of the woods, were a part of Nature's great balance—a system established at the beginning of time by a power beyond their conception.

Today man's relationship to wildlife is entirely different. Now man is the dominant figure, and wildlife exists at his convenience. As our country has grown and expanded, the vast hordes of wildlife that John Smith described have disappeared. The larger creatures—the bison, elk, wolf and panther—fled reluctantly, having learned that there could be but one result of trying to fight man. Today they have found refuge in remote places and, aided by the thinking people of America, are holding their own unmolested.

The smaller creatures, however, did not flee, but adapted themselves to the conditions imposed upon them by mankind. These are the wild folk we know from day to day: the birds of the trees about the house, the rabbit who comes to nibble on the lawn at dusk, the skunk in the garbage can, and the old woodchuck that lives under the barn. Here, too, are the more wary creatures of the woods — the big red fox of whom we catch a glimpse as he disappears into the bushes along the roadside, the doe whom we startle from her day bed in the woods, the red squirrel who scolds us from the top of a huge oak, and all the rest that live side by side with us, seldom seen but present nevertheless. These are the creatures with whom we are most concerned at present,

"John Smith . . . would be dismayed to see that progress, in making such great advances, has inevitably been destructive in some respects, notably toward wildlife."

for it is they who affect us most and who, in turn, are most affected by us.

Today few people derive their living directly from wildlife; therefore, few people realize its tremendous value. Most people are prone to complain when a hawk or fox carries off a chicken, yet very few stop to consider the hundreds of rats and mice the same individual will destroy in a lifetime. Of even greater value is the work done by songbirds in controlling insect pests who would soon divest the earth with their numbers and tremendous appetites if they were not checked. In this work they are aided by the tiny shrew, the blind mole, and even the fish in the ponds. Other birds feed upon weed seeds, which tends to keep weeds under control. Many of our trees are planted by a bird who drops a seed along a fence row or an absent-minded squirrel who forgets to come back for a nut he has planted. The raccoon or skunk in his nightly rambles may destroy the nest of a copperhead, or a snapping turtle who has been stealing young ducks. The harmless non-poisonous snakes, so often feared by unknowing persons, are of great benefit in controlling insects and rodents. The lumbering old woodchuck digs his burrows, which later often serve as homes for rabbits, or with a little enlarging, the fox. The crows and vultures of the air form a sanitation committee, expertly removing carrion. Even the tiny bee, who in his bumbling journey pollinates the flowers, is indispensable. All are a part of Nature's program. Nature has no room for the useless.

Many of the benefits of wildlife could not possibly be realized in cash returns, for we benefit from simply having wildlife around us. No value in dollars and cents could be assigned to the song of a bird in the trees or the sight of a fox slipping into the evening shadows. These are the benefits which we often fail to count, but their value remains nevertheless. Of increasing importance these days is the recreational value of wildlife. In this modern day and age, hunting in any of its many forms serves as a relaxing change from the daily grind of living, serves to keep man in touch with Nature.

So we see the immense value of wildlife, and thus realize the necessity for its conservation and management. The question now is, how best to conserve wildlife. For the sake of simplicity, we can consider any species of wildlife as a crop. There are four stages in raising a profitable crop: preparing the land, planting, tending and maintaining, and harvesting. These are closely akin to wildlife management. Let us consider them individually.

First is the preparation of the land. Two factors are essential to the existence of wildlife: food and cover. For small game, preparation need not be extensive in area. A corner of a field, too small to cultivate, a fence row, an unused field or a wood lot, all can be turned into excellent wildlife habitation at little cost. This can be done by simply allowing enough underbrush to grow to provide adequate cover, and by planting such food as ladino clover or bicolor lespedeza. More extensive projects, such as reforestation and building farm ponds, can be undertaken if funds are available. In any event, land that otherwise would be wasted is put to use in such a manner that both man and wildlife benefit.

Once food and cover have been provided, the second step follows almost automatically. As the capacity of a tract of land to produce is increased, wildlife population will—of its own accord—grow to fill the new capacity. In rare cases where a species has been totally exterminated, artificial restocking may be necessary. In almost all cases this can be done rather simply by using native species rather than exotics. Restocking should always be an honest attempt to establish a species in a given area, rather than simply mass release of hatchery game before hunting season. Once a species is established, it will continue and flourish so long as proper food and cover are maintained and hunting regulations are observed.

The maintenance of game leads to another question: Just how much is an abundance of wildlife? Is it enough to insure the continuation of a species in a given area with a reasonable excess for hunting, or must we have enough to enable every "mail-order sportsman" to go out and bag his limit and return home a hero? I fear that all too many people are inclined to favor the latter viewpoint. In this respect, a little measure of management of "sportsmen" would do a great deal towards simplifying wildlife management. An over-abundance of some species of game can become a nuisance to farmers and an abomination to hunters of other species. For instance, in areas where deer are too numerous, they cause considerable damage to crops, interfere seriously with other hunters, and become almost sure game for deer hunters. The natural balance is badly upset, the sporting element of the hunt is reduced, and general ill feeling results.

So we arrive at the last stage—the sensible harvesting of excess game. Left to herself, Nature handles the situation very well with her system of predators, keeps down the numbers of lesser animals who in turn are dependent upon lesser animals. However, man, a predator, is not dependent upon game; hence his numbers do not vary with the wildlife population. Furthermore, an alarming amount of the game taken by mankind is wasted because the sportsman does not care for game or cannot be bothered with cleaning it. Somehow, this wasteful killing must be ended. This can best be done by emphasizing the sporting aspect of hunting rather than the pleasure of killing. If more of those who hunt for sport alone

could be persuaded to hunt with hounds or cameras, which actually require more skill than gunning, maximum sport could be derived from a minimum of game. Undesirable overpopulations of certain species would be unnecessary and all concerned would benefit. Thus we see, then, that while it is necessary to provide adequate hunting to harvest excess game, we must eliminate wasteful hunting practices.

By considering wildlife as a crop, we find major steps in wildlife management rather obvious. The over-all system of cropping is effective in every field of conservation. However, in putting the system into effect, we find innumerable problems. Often in considering these problems, it is best to cease thinking of wildlife in the dry terms of a crop, and begin to think of it in terms of actual creatures of Nature.

Perhaps the great problem in wildlife is man's continued encroachment upon the domain of wildlife. We are powerless to stop human expansion; we can only try to educate people to consider the needs of wildlife as they consider their own needs. We must teach them to avoid such harmful practices as industrial and domestic pollution of natural waterways, poor farming practices and lumbering methods, haphazard draining of swamps and marshes, burning of brush, and other careless and thoughtless acts which inflict heavy damage to wildlife.

Finally, we come to the greatest necessity in wildlife conservation, that of enlisting the aid of every possible person. For wildlife management is not solely a job confined to the Commission of Game and Inland Fisheries and kindred organizations or even of several of the federal government agencies. It is your job, my job, the job of every persons who calls himself an American. When America was young, struggling to grow and expand, her pioneers depended upon wildlife. Modern America still needs its wildlife. It is still one of our basic natural resources and one that, if neglected, would weaken other basic natural resources. A weakened natural resource base would find our nation weakened, insecure. It is everyone's responsibility to see that this does not happen.

Cross Takes Over Game Division Post

Two career men step up: Former game division chief Chester F. Phelps, now executive director, congratulates his successor, Richard H. Cross (right).

The Virginia Commission of Game and Inland Fisheries, at its regular monthly meeting on May 5, appointed Richard H. Cross, 39, supervising biologist, to succeed Chester F. Phelps as chief of the Commission's game division, beginning July 1, 1958. Phelps' appointment as the Commission's new executive director, beginning July 1, was announced in April by the Commission.

Cross has been transferred from his position as leader of the forest-game cooperative development program on the Jefferson National Forest at Roanoke to the central office in Richmond.

Cross was first employed by the Commission in March 1942 and has worked as a game biologist and game biologist supervisor on the Virginia national forest program. He graduated from Randolph-Macon College, Ashland, Virginia, in 1940 with a B.A. degree and obtained a master's degree in wildlife conservation from the Virginia Polytechnic Institute in 1942. During his course of graduate studies at VPI, Cross worked on the techniques of gray squirrel management.

Between January 1943 and December 1945 he served with the United States Air Force with the 79th Fighter Group in the Mediterranean Theater. He reached the rank of major in the service.

The important post of game division chief in the central Richmond office calls for the administration and supervision of the entire game management program, including the utilization of the federal Pittman-Robertson funds which are allocated to the state from the excise tax on sporting arms and ammunition. This involves the planning and supervision of numerous projects throughout the state such as big game management, waterfowl restoration, the purchase and development of public hunting lands and refuges, and the extensive farm-game program in cooperation with the Virginia soil conservation districts, private landowners and others.

Cross is married to Mary Jo Shipley of Athens, Tennessee, and has one son, Richard H. Cross III, age 9. Among his hobbies Cross lists grouse hunting and trout fishing.

VIRGINIA POISONOUS SNAKES

By Ernest A. Taylor

THIS state has three recognized species of poisonous snakes: the timber rattlesnake, of the uplands; the copperhead, sometimes called the highland moccasin: and the cottonmouth moccasin, found along the tidewater inland reaches and brackish and fresh waters.

The timber rattler is found in two distinct color phases, the dark (black) phase and the light (yellow) phase. The former is characterized by reddish V-shaped cross bands along the entire body, the latter by a reddish brown strip running down the body, tail black.

Specimens have been taken which were over five feet long, but the usual length attained is much smaller. This member of the pit-viper group has a lance-shaped head, the pit lying in a line between the eyes and the nostrils. The depression is extremely sensitive and is said to aid the snake in sensing danger. It has no external ear; the eyes are vertically elliptical in daylight, and almost round at night when the snake is on the prowl. The fangs are long and erect with several sets for replacement if and when the first, or front, set becomes lost. On the lower front side of the fangs a vertical slot is seen, through which the venom is excreted. A membranous tube connects this slot with the poison sac located in the upper mouth almost under the eyes. On each side of the fangs, in the upper mouth, there are permanent teeth which tend to lean backwards. In the lower jaw bones and on each side are other permanent teeth, somewhat larger than the upper teeth, which curve backwards to facilitate eating.

The hind part of the rattler's head is much larger than the neck, and the body assumes a much larger diameter continuing to the vent. From there the tail tapers rapidly, ending with the button and the rattle. The rattle does not denote age, but is the result of shedding. The outer skin is shed sometimes as many as four or five times each year, allowing for the growth of the reptile. The button at the end of the rattle is permanent, and is not affected by the shedding of the skin.

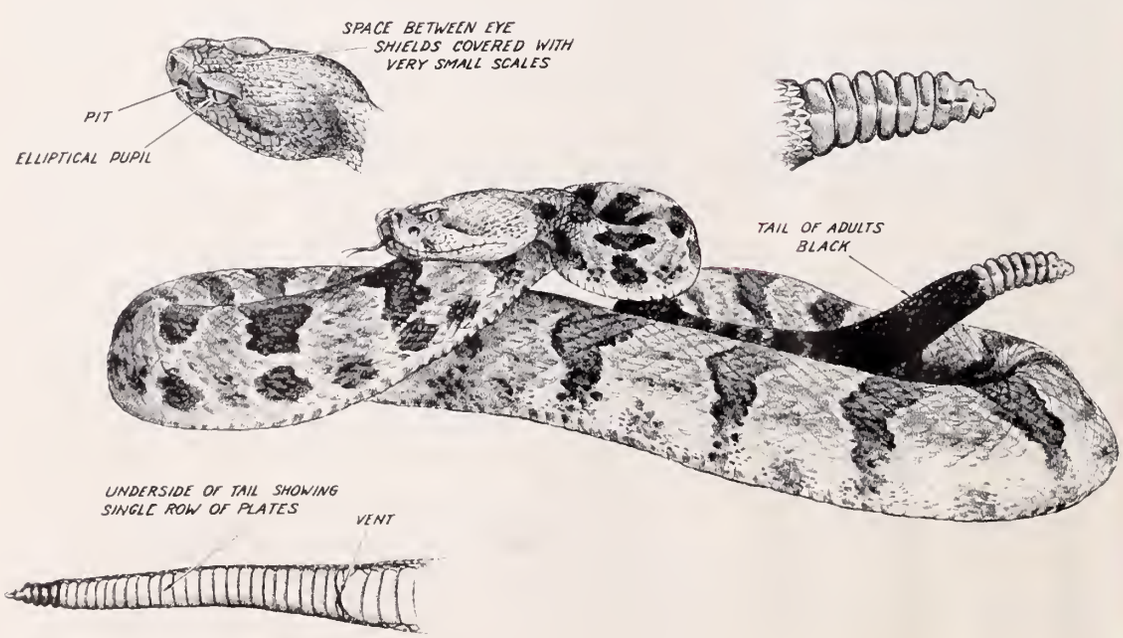
The characteristics of the copperhead are somewhat similar to those of the timber rattler. The shape of the head, eyes, fangs, tongue, fixed teeth, and size of body are about the same. This snake is also a member of the pit-vipers, and has the two color-phases. The markings resemble an hourglass and may be reddish-brown or deep chestnut-brown, edged in black margins. The top of the head is coppery-red; hence the reason for the name, "copperhead." The tip of the tail may resemble a coppery collar, ranging from green to yellow. The snake attains a length of four feet, although larger specimens have been taken on rare occasions. The common length is around two and a half feet.

The foods of the rattler and the copperhead are quite similar, consisting of small rodents, birds, eggs, insects, grubs, and frogs. The largest portion of the food of both species is rodents.

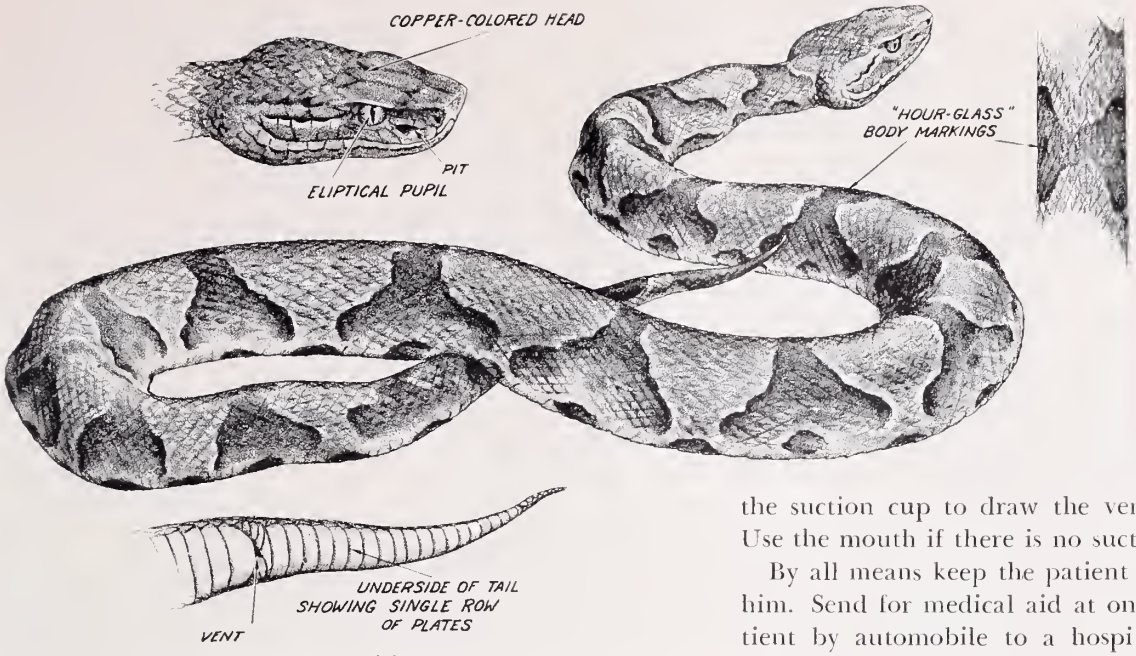
The food of the cottonmouth moccasin consists of trash fish, frogs, salamanders, crayfish, small turtles, rats, small mammals, and sometimes even small waterfowl. Rarely does it feed on game fish.

Each of these three snakes gives birth to young, usually from 4 to 12 at a time. The young arrive in mid-summer and are immediately a potential danger for they fend for themselves at once and can deliver their venom whenever they strike.

Snakes do not require a coiled position to strike. Any position is adequate. They are not easily provoked into



The timber rattlesnake is found in two distinct color phases. The dark phase is characterized by reddish V-shaped cross bands along the body. The light phase is characterized by a reddish-brown strip running down the body and a black tail.



The copperhead is known by its brown hourglass markings edged in black and by its coppery-red-colored head.

striking and would prefer to slither away.

A snake's tongue is not a stinger but rather is a forked organ, highly sensitive to the atmosphere, and it telescopes into the sheath within the lower jaw. Tasting the atmosphere is the snake's method of telling danger; a forked tongue is thus an aid to self defense.

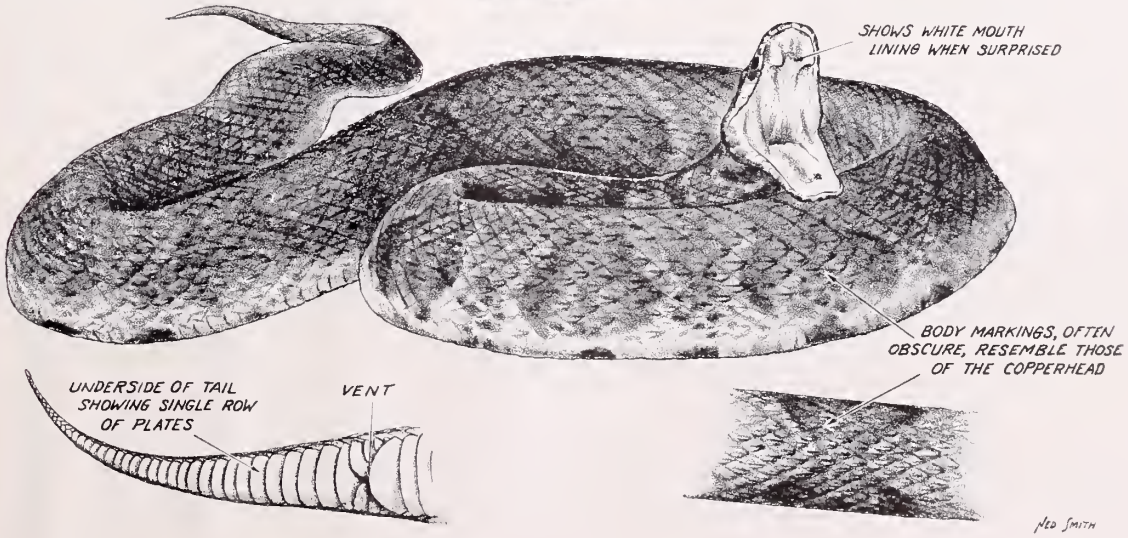
In snake bite, the venom of the pit-vipers breaks down the red corpuscles and is very virulent. The venom is a yellowish or brown viscous fluid. Each of the two tubular fangs is capable of discharging venom, leaving a tell-tale small, round, red mark. Swelling and pain occurs soon after a bite; discoloration follows.

The best-known first aid for snake bite is suction. Wash the area around the bite with antiseptic, then place a tourniquet two to four inches above the bite. Tighten just enough that the fingers may be pushed under it. Every 10 to 15 minutes loosen the tourniquet for one minute. A suction cup should be close at hand, where it can be reached in a hurry. Then, with a sterile, sharp knife, razor, or blade, make a letter H-cut about one-quarter inch deep and one-quarter inch long, just over the fang marks. As the swelling spreads, make other cuts just above the swelling and about two inches apart. Use the suction cup to draw the venom from the incision. Use the mouth if there is no suction cup available.

By all means keep the patient quiet. Do not frighten him. Send for medical aid at once, or transport the patient by automobile to a hospital if one is available. Continue the suction for one and one-half hours, or until the doctor arrives. Do not give a stimulant to the patient, for it tends to stimulate blood circulation, spreading the poison that much faster. Seldom does a patient die from the bite of one of these snakes. But some die from shock or fright.

Snakes fall prey to hawks, owls, foxes, waterfowl, raccoons and hogs.

The best precaution against snakes is a pair of leather boots, heavy pants, and normal caution. Never step over a log—step on it. Look around, then step down. Caution is the best preventative. Don't kill snakes indiscriminately, for they work for us in one way or another. They eat rodents that destroy grain and infest our living quarters. They consume insects which destroy crops, and they indirectly affect man in many ways. With normal caution everyone can enjoy the out-of-doors without excessive fear of snakes.



The cottonmouth moccasin is a water snake with obscure markings resembling those of the copperhead.

Game Commission Photo by Mullins

Vigorous conservation programs on a partnership basis are essential if waterfowl are to be preserved for future generations of Americans.

THE CONSERVATION PARTNERSHIP

By ROSS LEFFLER

Assistant Secretary, Department of the Interior

OUR heritage of abundant wildlife, and the public recreation which is dependent upon it, is in a critical situation. There is an awareness of the mounting threats to fish and wildlife values. By the hand of man, moved by the force of an American population growth at a pace which startles us, living space for wildlife is being transformed—many times unnecessarily—into sites for housing and industries and sometimes into areas for sewage, waste or trash disposal. We also have lands taken out of wildlife use for transportation, power, clothing and food. We have conflicts for water supplies and uses which are growing more and more complex.

Don't get the impression I have the philosophy of a Canute commanding that there be no progress. That we must have if America is to maintain its position, but it should be achieved without loss of fish and wildlife values. Nor should you try to find in my remarks the slightest desire to perpetuate the arguments which have long split many of the governmental agencies involved in resource management. In my opinion, all that has been accomplished by this senseless feuding has been the retarding of progress. In words so wisely used over the years by foes of bigotry, "There are many roads up the mountain, but only one moon shines on the top." Similarly, there are many ways to carry on good conservation practices, but only one goal: To preserve for those who come after us the opportunity to enjoy the rich heritage of natural resources which have made possible our way of life.

I am not saying good soil and water conservation are enough to insure fish and wildlife conservation, or that you can have the latter without the former. Neither am I using the shopworn expression that conservation is wise use. Sometimes in our business, it may not be wise use to use at all. Circumstances will define such prescriptions. Actually, our resource management to be successful and meet all public needs now and in the future must be a balanced program in which are integrated all of our conservation practices with none advanced at the expense of the other.

Let's Stop Being "Agin-ers"

To attain that objective at the earliest possible moment—because delays cost us valuable ground—I again say: Let's forget the mistakes of the past by our various agencies, stop being "agin-ers" and start developing answers to our resource problems which we are all *for*.

I am not a purveyor of panaceas; thus you do not find me here proposing answers to this, that or the other

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Address given on October 21, 1957, before the Southeastern Association of Game and Fish Commissioners at Mobile, Alabama.

problem which is confronting us in the fish and wildlife field. Development of the answers is the job of our trained personnel in research and management, and I don't mean just those who work for the federal government, although—bless them—those boys do a real job for us, and they don't get rich at it either, unfortunately.

It is my role in the Secretarial family in Interior to discuss and develop policy for Department adoption which will stimulate progressive fish and wildlife thinking and encourage its application in management by all agencies and individuals everywhere and on the scale the future demands.

Land Acquisition, Research Needed

As I have said before, ours is a most complex problem. We must promote the preservation of land and water habitat for fish and wildlife as a long-range investment by any and every means possible—acquisition, easement, lease, incentive or what-have-you. We must speed research to develop management techniques which produce more fish and wildlife on the areas still available. We must help other agencies make similar advances so their products from the land can be supplied in greater quantities from less areas, too, and thus reduce competition for the living space needed by fish and wildlife. There are many other inter-related problems also requiring study and action.

How can we best accomplish all these tasks? That question leads me to the heart of what I have to say. It involves a most important federal fish and wildlife policy. I have mentioned it a number of times; Secretary Seaton has referred to it also. Usually our comments have been incidental to generalized discussions of our program planning. I feel, however, that it is so important, so vital to our success, that it should be discussed in detail and thoroughly understood by everybody. It also must be practiced by everybody.

I refer to the partnership approach in fish and wildlife. *It is the only way we can do all the jobs which have to be done.* Don't let anybody kid you into thinking any of us can get along without the other.

Our Only Hope Is Teamwork

First of all, if either state or federal agencies, or the private organizations, were loaded with money and manpower—which they're not—individually we still wouldn't have enough capacity to get all the research and management jobs done in time to escape the fish and wildlife losses we seek to avoid. Even under the best of circumstances for all of us, our only hope is in the closest kind of teamwork which will eliminate waste effort and make our combined contribution as effective and as fast as is humanly possible.

The states are looking to the federal government for—and they deserve to receive—guidance and coordination for their activities in areas of mutual interest. In research, they would like to know what is being done by whom on fish and wildlife problems that concern them and how they can handle their share of the investigation pattern without duplicating someone else's effort. They also want a central source of information on latest developments in management practices; they seek constructive criticism on new types of programs they develop, and they want to know how they can contribute most effectively to the management of species which are the primary responsibility of the federal government, but which are also of major interest to them.

It is our intention to establish our activity pattern in the partnership to provide these services—to discharge these responsibilities in a way which will meet the important needs of the states in resource programs for tomorrow.

No Double Standards In Conservation

So that there may be no misinterpretation about the effect of the partnership approach, I want to make several points very clear. I do not feel that the development of a conservation team means the federal government is surrendering responsibilities. Neither can I interpret willingness to cooperate as an invasion of someone else's so-called rights. I am also absolutely certain that any claim the Fish and Wildlife Service is placing itself in the position of being told what to do by the states when it cooperates with them is utterly ridiculous.

After all, I know the state fish and game departments have the same objectives as the Service. It can't be otherwise. There are no double standards in conservation. I also know that the states have been demonstrating a real desire to work closely with the Service. The Flyway Councils, like the Atlantic Waterfowl Council and the Mississippi Council, are an excellent case in point. The development of flyway management plans through these

In partnership with the U. S. Fish and Wildlife Service, the states are expected to keep their program objectives geared to the best interests of the resource rather than temporary local harvest benefits.

Game Commission Photo by Kesteloo

U. S. Fish and Wildlife Service Photo

Wildlife restoration efforts on the more than 200 federal refuges furnish breeding, resting, feeding and wintering grounds for waterfowl and other wildlife. These refuges are key factors in maintaining our present game populations.

councils with representatives of the Service and the states sitting down together, pooling knowledge and jointly coming up with guidelines for future action is the only way to operate. It's the only worthwhile approach—the partnership way.

I also know the Service needs the thinking of the able technicians in the states and private organizations who are working in these specialized fields, and it needs the ability of these agencies to apply practices at the problem level. After all, the state organizations are at the grass roots. Not only do they have the best opportunity to apply remedies, but collectively they have more hands for the job.

The States Also Have Responsibilities

This is not a one-way street, however. I've been stressing the Service's responsibilities to meet certain needs of the states. The states also have responsibilities in this partnership. Primarily, it is up to them to keep the program objectives of *all* states—in the case of migratory as well as resident species—always geared to the best interests of the resource rather than temporary local harvesting benefits. On this one, I think there has been a very good record made in recent years. The credit for this belongs to the fine professional biologists in the state ranks who have been spark-plugging their part of the drive to promote the cooperative effort generally.

We are developing our partnership programs not on the basis of political boundaries, but from patterns provided by wildlife itself. We must encourage this kind of planning which rises above the limits of local thinking and which meets broader basic needs. Again, I mention the flyway management plan as the good example. In connection with such cooperative programs, we have a joint responsibility to avoid the pitfall of establishing projects which either have not been checked for conformity to flyway plan objectives or which fail to meet that test even though they provide a temporary local benefit. If we are going to get the most from our efforts from now on, we want to make each move count. The only way we can do that is to make certain all our projects conform to a pattern for action which has been jointly agreed upon as the right way to meet our future needs. There can be no exceptions.

When we have this kind of broad planning, such as the flyway approach for waterfowl, the Service must have specific national policies to guide field action. There must be uniformity of execution. Regionally, there cannot be six different kinds of performance and have management plans efficiently executed in flyways which extend not only beyond Service regional lines but beyond the boundaries of our country. Although, under treaty enactments, responsibility for migratory bird management rests with federal government, I again think these policies should be developed in consultation with our neighbors in North America and with the state fish and game departments and the private conservation agencies which have direct interest and whose activities in connection with the flyway program also will be affected.

Conservation Confusion Must Be Eliminated

Our partnership goes beyond the team effort in planning and in action. We must also talk the same language so that there can be resource-minded public understanding rather than conservation confusion. Only with that understanding will there be public support for our programs. Only with that support will we get the appropriations and authorizations needed to carry them out.

In these discussions, I have used only the example of waterfowl planning as an area for cooperative effort. The need applies equally to other programs in which the states and private agencies and the federal government have interests. It must be met in all cases. I leave you with a conviction and a promise:

1. There can be adequate fish and wildlife conservation progress only if we have complete cooperation.
2. It will be the policy of the United States Fish and Wildlife Service to constantly promote the conservation partnership approach.

Now, let's get going!

A hard-working commission takes time out to pose for a picture in its hearing room at 7 North 2nd Street, Richmond, Virginia. Name plates are opposite each official. Lower left inset: I. T. Quinn, retired executive director. Lower right: C. F. Phelps, new executive director.

TWELVE YEARS OF WILDLIFE CONSERVATION PROGRESS IN VIRGINIA

Approximately twelve years ago the Virginia Commission of Game and Inland Fisheries launched its first broad program of wildlife conservation with its new director, I. T. Quinn, at the helm. After more than a decade of significant progress, during which time the Commission has grown in size, revenue, responsibilities and personnel, "I. T." is passing on the reins of directorship to Chester F. Phelps, an experienced game biologist and administrator. Phelps takes over a well-organized department with lots of "young blood," and it is expected that Virginia will continue to move ahead and become one of the leading states in the field of modern scientific fish and game management.

On the following pages is a brief pictorial report on the accomplishments of the Commission over the period 1946-1958.

FARM GAME RESTORATION efforts have included a far-reaching program of habitat improvement, the use of various game management techniques in game restoration (quail and turkeys particularly) and cooperative programs with other state and federal agencies and private landowners.

LAW ENFORCEMENT. Significant strides have been made in game law enforc equipped. Education without irritation is now an important

Major big-game accomplishment has been the restoration of the deer herds west of the Blue Ridge through restocking and proper deer management. State deer herds number nearly 250,000. Thousands of wildlife clearings on national forests have been made.

GLIMPSES OF PROGRESS IN

Important progress by the Virginia C has been made in game management, fish tion-education and administration. Illustr Commission personnel are using the most and-true approach—to efficiently serve th

Commission ph

EDUCATION. Twelve years ago the Commission had no educational program in the nation. *Virginia Wildlife* has become a respectable magazine. All form Division now employs 14 people, half of whom are te

The purchase of public wildlife lands and access areas has been a significant aspect of the Commission's recent game program. More public lands and access areas are planned.

Wardens are now better paid, better dressed, better trained, and better t of their work. Law enforcement is more efficient.

FISH RESTORATION work made great strides in Virginia. Restocking of waters has continued apace, an additional fish hatchery was constructed, a public lake construction program begun, and fisheries biologists were employed to do fish management work.

WILDLIFE CONSERVATION

mission of Game and Inland Fisheries
nagement, law enforcement, informa-
d here are a few of the ways in which
dern techniques—as well as the tried-
itizens of the Old Dominion.

Kesteloo

Fisheries management work is being done through Dingell-Johnson projects. Today, hundreds of waters have been surveyed, ponds re-balanced, and fishing pressure information collected.

ay it has an information-education program that is rated as one of the best ommunication are employed in a balanced wildlife education program. lly trained conservationists and "communicators."

In the past 12 years the Commission has built 8 new public lakes and now actively manages some 50 other ponds open to the public. Also, a public access program was initiated and will be expanded.

In the area of administration, significant forward advances have been made. The Commission revenue in 1946 was only $600,000. Today it is $2,000,000. The Commission of Game and Inland Fisheries is supported entirely by hunting and fishing license revenues, plus federal aid monies through Pittman-Robertson and Dingell-Johnson projects and 15% dog license revenue. The Commission is a self-supporting agency since no money from the General Fund goes to its support. Support is entirely by the hunters and fishermen.

HIGHLIGHTS OF THE LAST FOUR YEARS

Law enforcement became increasingly more effective. Uniform merit increases established higher personnel standards and performance. Two-way radios, and additional boats and other equipment made officers more efficient, resulting in a record of game, fish, and dog law convictions. Better cooperation with courts, county government and the public was also effected.

Game restoration was guided by modern scientific wildlife management. Emphasis was on habitat improvement, mainly food and cover, with landowners and public agencies cooperating. Deer restocking was completed and hunters' take reached an all-time high. The critical waterfowl situation was aided by purchase and development of strategic wetlands.

Fish work was advanced in propagation, lake construction and public access, and scientific management. Briefly, a new fish hatchery was built, 3,000,000 fish planted in 366 waters, 6 lakes constructed, 2 ponds and 1 access road purchased, fisheries biologists increased from 2 to 5, with investigations and management greatly expanded.

Educational work was also expanded. *Virginia Wildlife* doubled in circulation (now 36,000 paid)—became one of the nation's best. Numerous publications and newsletters were prepared, distributed. Produced were 3 films, 215 radio-TV programs, 80 exhibits reaching 700,000. There were 1,200 lectures, 110 camp programs, 3,363 film bookings reaching 457,172, and 60,000 school essays prepared.

SOME FUTURE PLANS

The Commission's new executive director, Chester F. Phelps, is working out a challenging program to cope with immediate and long-range wildlife conservation problems in Virginia. He expects to see game and fish law enforcement officers become more efficient as counties begin to take over dog law enforcement. Game management problems, such as a decreasing supply of turkeys and local overabundance of deer must be solved. Public access areas to the better fishing waters will be located and constructed. Also public awareness of the problems involved must be created through more education.

Virginia Chamber of Commerce Photo

Governor J. Lindsay Almond, Jr., casts into the surf to open the Virginia Salt Water Fishing Tournament at Ocean View May 1.

Virginia Salt Water Fishing Tournament

SALT WATER sport fishing is expected to receive a big shot in the arm from the first Virginia Salt Water Fishing Tournament, which was opened at Ocean View May 1 at the meeting of the sponsoring Salt Water Sport Fishing Association of Virginia. Governor Almond was presented with a surfcasting rod and reel outfit and made a hefty first cast into the surf at Ocean View.

Tournament officials have released the following information:

Sponsorship—The Tournament is sponsored by the Salt Water Sport Fishing Association of Virginia and is the result of two years of research, planning and organization by the Association and the Virginia Department of Conservation and Development.

Tournament Waters—The waters of the Tournament include the 120-mile frontage of the Atlantic Ocean with its nearby Gulf Stream; 75 miles of lower Chesapeake Bay; the tidal rivers—Potomac, Rappahannock, Piankatank, York, James—Mobjack Bay, Lynnhaven Bay, and a hundred famous creeks and little bays, all salty estuaries and tributaries of the Chesapeake.

Eligibility of Contestants—The Tournament is open to everyone—men, women and children—who fishes in the Tournament waters from May 1 to November 1, 1958, and who complies with the Tournament rules. There are no fees for participation or for entering a catch for a Tournament award.

Species of Fish—The Tournament species include the cobia, channel bass, striped bass (rockfish), bluefish, white marlin, dolphin, black drum, tautog, spotted sea trout, gray trout, sea bass, flounder, croaker, spot, white perch. (Catches in Virginia waters include three present world IGFA records—cobia, 102 pounds; channel bass, 83 pounds, and black drum, 94½ pounds.)

Methods—The Tournament is limited to rod and reel catches only—bottom fishing, surface and mid-water fishing, trolling, casting, surf casting and pier fishing. Chumming is permitted.

Weighing Stations, Boats and Awards—In all the fishing centers are official Tournament Weighing Stations. Only charter boats are required to register. Anyone making a catch of Tournament standards from a private, registered or charter boat, surf or pier may, upon docking, enter his catch at a nearby Weighing Station where official forms are available. Tournament Awards are *Trophies* for heaviest catches of the several species, and *Certificates* for commendable catches in any species, and for outstanding acts of sportsmanship, such as releasing fish below Tournament standards and unwanted for mounting or eating.

Trophies and Memberships—The Tournament invites donations of permanent trophies and membership subscriptions. These will be published by the Tournament and by State and Local agencies. The design, cost and event of a trophy may be worked out with the Tournament Director. Membership applications should be made to the Director.

Further Information—For further information on the Virginia Salt Water Fishing Tournament or the Salt Water Sport Fishing Association of Virginia, communicate with Virginia Salt Water Fishing Tournament, Claude Rogers, director, Virginia Beach, Va.

Mrs. Ross H. Walker of Richmond with her second blue marlin, caught July 3, 1957, in the Gulf Stream off Hatteras, N. C.

Photo by Aycock Brown

Fourth of July—a Day Early

By MRS. ROSS WALKER

Camera fiends arriving at Hatteras a day early for the Fourth last year must have boosted the sales of film quite a bit. Lady Luck sat upon my right shoulder and I was able to snag my second blue marlin on that date. It was quite a whopper and weighed in at 415 pounds by the official Hatteras Bill Fish Club weighmaster, Mr. M. L. Burrus.

A lot of hard work and breath-holding preceded this dramatic moment for all concerned. After catching my first one almost five years prior to this date, I had just relaxed on my laurels and hoped my husband would have his chance. But no. Again Mr. Marlin liked the looks of my mackerel enough to jab at it and knock my line from the port outrigger.

After a few tense moments, I tried to set my hook, only to realize that no fish was there. Captain Ernal Foster said to reel in, and reel in I did. When, almost at the stern of the boat, the Big Blue, maddened by his previous miss, made a huge strike and put me once more in business. Dejection changed to elation in a split second when I realized I had set the hook this second time. I guess it is a rare thing indeed to have a second chance at a fish of that size. He took off some 400 yards of line on that first spectacular run and thereafter made only one more jump. He fought deep and hard out there southeast of the Diamond Light Ship.

An hour and twelve minute fight ensued. When I reeled him close enough to be gaffed by Mate Ivey Batten, the fish was just about dead from diving deep and internal bleeding.

Twice now I've been lucky that no sharks have appeared to attack my fish.

This one, we felt, really rated going to Port with the blue flag a-flying. Captain Foster's Marlin flag was aboard another of his boats that day and I was desolate until I looked in my suitcase. There I found a faded blue fishing shirt of mine. This we immediately ran up on the outrigger for the trip to port.

The fish remained on display on Captain Foster's quay over the holiday and I guess probably has the distinction of being "shot" by more picture-takers than any other Blue Marlin.

The fish was sizable enough to give me fifth place in the Annual Field & Stream Fishing Contest for 1957.

Of the five prize winning fish, the third and fifth were caught at Hatteras. One of the five honorable mention awards was also for a marlin at Hatteras. The other seven "prize and honorable mention" fish were all caught in the Bahamas and Puerto Rico. Quite a boost for Hatteras, N. C., U.S.A.!!!

Guess what my husband and I are doing these evenings? Yes, we are hopefully winding yards and yards of heavy duty line onto heavy reels and counting off the days until we go a-hunting for *HIS* BIG BLUE at Hatteras.

* * *

Just Five Years Ago . . .

THE story of Mrs. Walker's first successful bout with a blue marlin also appeared in VIRGINIA WILDLIFE. The October 1952 issue featured an illustrated personal account of her four-and-a-half-hour struggle with her first "Big Blue." Interestingly enough, she was aboard the boat, *Albatrosss II* with skipper Ernal Foster, and in the Gulf Stream near Diamond Light Ship when she caught both fish.

On the Walkers' first trip to Hatteras, North Carolina, they cought dolphin, amberjack, false albacore, arctic bonita and king mackerel—the dolphin and amberjack weighing up to about 25 to 30 pounds and the king mackerel running to about 15. On their second trip, they decided to try only for the "Big Boys."

It was on this trip, their first go at the marlins, that Mrs. Walker boated the 10-foot-10-inch 367½-pound blue. During the struggle, it was necessary to cut her line and attach it to a larger reel; and their boat was almost run down by a tanker as the fish, fighting deep, pulled them toward the shipping lane.

They noted, from the Coast and Geodetic Survey chart, that the water was about 200 feet deep where the fish was hooked and about 900 feet deep where the fish was boated.

Mrs. Ross Walker is the wife of Ross H. Walker, prominent Virginia big game sportsman, active member and former state division president of the Izaak Walton League of America and member of the State Water Control Board.

(Editor's note: Late reports from Oregon Inlet and Cape Hatteras, N. C., indicate that an unusually large number of marlin have been sighted and caught in that vicinity recently in one of the best marlin seasons in years. No fewer than several dozen large marlin have been landed on the Carolina coast in recent weeks.)

* * *

"We were always seeking the great game fish, the leapers, the fighters that took hours to subdue; we always dreamed of strange new waters, of huge unconquerable denizens of the deep."

—from Zane Grey's *Tales of Fishing Virgin Seas*

Projects for Outdoor Education

By MAX CARPENTER

Special Services Officer, Northern District

EFFORTS to teach more outdoor education have increased in the last few years on national, state, and local levels. Programs include such sports and skills as casting and fishing, hunting, camping, hiking and boating. In Virginia, programs have been pushed in the public schools largely through efforts of the State Department of Education, the American Association for Health, Physical Education and Recreation, the Commission of Game and Inland Fisheries, and other state agencies interested in preserving outdoor sports. A start has been made. Future years should see a substantial increase in the number of classes on outdoor education being taught in our public schools.

Several years ago questionnaires were sent to high school principals to get their reaction on including outdoor education projects in their curriculum. Some thought it was justifiable but just another addition to a full school program. Enough felt, however, that it was worth trying.

During September of 1956 the Virginia State Department of Education conducted an outdoor education workshop at Camp Richmond. The workshop was offered to key education people of the state not only to get their reaction to teaching outdoor education but to give them some ideas and training on how to teach such courses in their respective schools.

One main drawback to the success or progress of this program is the lack of information and interest on the part of the busy health and physical education teacher who is called upon to teach the classes in outdoor education. How does one go about teaching a class in fishing or hunting? The best answer is to tell what is planned and what has been done. This year several counties and school divisions will include some classes in outdoor education. Some of the things being stressed in Augusta County, for instance, have been tried by the writer and have proved interesting and successful.

Bait, Fly, and Spin Casting Classes

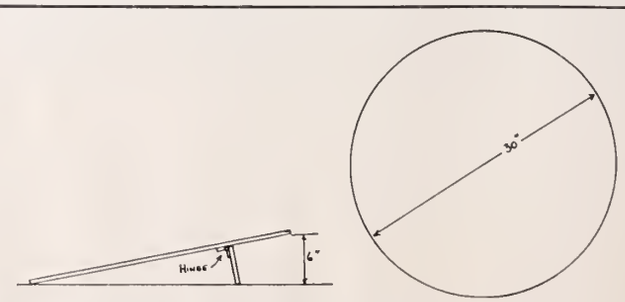
Probably the easiest class to teach, and with a minimum of equipment, is a class in casting. Bait casting is a good beginning, followed by instruction on spin casting. Instructors should secure the literature available on casting from the National Association of Angling and Casting Clubs, 958 Paul Brown Building, St. Louis 1, Missouri. One booklet explains *skish,* which is a game dedicated especially to the improvement of fly, bait and spin casting. Another manual explains tournament rules for fly and bait casting. A third gives step-by-step instruction on setting up and teaching a class in casting. The instruction manual was prepared by Mr. Clifford Netherton of Herndon, Virginia, an ardent caster who has taught casting classes for many years in Washington, D. C., during physical education periods.

Equipment for a casting class can be secured at little expense. Have the students bring their own fishing equipment. Provide them with rubber casting plugs, 5/8 oz. for bait casting rods and 1/4 oz. for spinning rods. These are available at sport shops. Three or four are sufficient. Targets can be made of 1/4-inch plywood as shown in the accompanying sketch. Cut out two or three circular plywood targets 30 inches in diameter and hinge a 3/4-inch piece of wood two inches wide on the back to tilt the target as shown. Paint each target a different color. Each colored target can be set at a different distance from the casting line. Three casts are made to each target and any system of scoring can be devised to suit the group being taught.

Last summer the writer conducted six fishing classes in various summer camps throughout Virginia similar to the one shown in the lead picture. It is surprising how fast the art of casting can be developed even by people who have never held a fishing pole before. After a few simple instructions, beginners could cast 20 to 30 feet, and even the instructors of the camps were as eager as the campers to learn to cast properly.

Hunter Safety Classes

Nine states now have a law which requires the young hunter applying for his first hunting license to prove he is competent in handling a gun. Very little has been done in Virginia, beyond the talking stage, to teach gun handling and gun safety to high school students. Here is an excellent opportunity for an outdoor education class in gun safety or hunter safety, whichever name is preferred.



This dry land casting target, designed according to National Association of Angling and Casting Clubs standards, can be made of 1/4" exterior plywood with a hinged peg for convenience in handling and storage. Recommended colors: red, white, blue, green, yellow.

Game Commission Photo by Kesteloo

Six fishing classes were taught in camps during the summer of 1957 similar to this one at the 4-H camp at Holliday Lake. The fishing laws and fundamentals of all types of casting were stressed, together with some actual casting by the campers.

Classes in hunter safety should include such things as the difference between the various makes of shotguns and rifles, also which ones are lawful and proper to use in Virginia on different game species. It should include proper gun care, explanation of different shooting positions, how to sight correctly, how to build targets, what and what not to shoot at, and many other phases of hunting. Part of the class should be devoted to learning the game and fish laws. Further instruction on how the hunter can help in wildlife conservation and proper methods of cleaning, skinning, and caring for game could be included in the class.

Anyone planning to teach a hunter safety class should apply to the National Rifle Association, 1600 Rhode Island Avenue, N.W., Washington 6, D. C. to become a certified instructor and also to receive literature on teaching gun safety. Western-Winchester has a booklet in the form of a comic book that would make an excellent teaching guide.

A hunter safety class could be held in the gymnasium of the high school. Firearms companies even have plans on how to build a firing range under the gym stage or in a basement room. However, instruction out-of-doors has the advantage of more natural surroundings from the hunting standpoint, and firing ranges could be set against a bank close to the school grounds.

Actual firing of guns is the best way to conclude a course on hunter safety,but it may be impossible in some areas to do this. During a hunter safety class at Holliday Lake in 1955, permission could not be obtained to use .22 rifles with live ammunition. In this instance BB rifles were used and, although not as effective as .22's, did provide some competition and good practice on holding and sighting.

Some young hunters who seemed too small to lift a gun were seen during the past deer season. Let's get some gun training to them; it will make hunting safer.

Other Projects

There are other projects which would be interesting and necessary for a well-rounded outdoor education program. Although no classes in these projects have been tried by the writer, they are mentioned briefly for ideas on what to teach in outdoor education:

1. *Boating and canoeing.* There is a definite need in Virginia for some classes on how to handle a boat or canoe, for each years brings its toll of boating accidents among fishermen and hunters. Phases of this subject suitable for high school would include instruction on rowing, entering and leaving a boat, changing positions in a boat, and how to act if a boat overturns. Many items which could be covered in a classroom are naming the parts of a boat, rules of the waterways with boats, differences in makes of boats and canoes, and care of such craft during the winter.

Classes on boating could be taught during fall and spring months of school when the weather is warm or during the winter if an indoor pool is available. Many schools are near a lake or farm pond where a class could observe the proper methods of handling a boat and canoe.

2. *Outdoor cooking.* Cooking outdoors is thought of more as a hobby than as a sport but it is closely related to hunting, fishing, and camping. People will have more fun outdoors if they know how to cook indoors. A class

(Continued on page 24)

FISHING IN THE NORTHEAST VALLEY-MOUNTAIN AREA OF VIRGINIA

By JACK HOFFMAN

Fisheries Biologist

THE northeastern valley and mountain region of the Old Dominion offers some attractive and exciting waters for sport fishermen. Here is some of Virginia's most beautiful trout country and here in the shadows of the Blue Ridge and high Alleghenies lurk some of the nation's finest freshwater game fish — the smallmouth bass.

The Shenandoah River offers Virginia anglers outstanding smallmouth bass fishing from Riverton to the West Virginia line. This rich limestone stream consists of deep eddies separated by long shallow riffles. Channel catfish are taken in large numbers—especially at night. The stream may be fished from the bank, by wading the riffles or by floating.

Excellent smallmouth bass fishing is found in the South Fork Shenandoah River from Port Republic to Riverton. Channel catfishing is good here also. The stream may be fished from the bank, by wading or by light boat. Since the riffles are long and shallow, float fishermen should stick to light boats during dry season. The North, Middle and South Rivers, which make up the South Fork, offer considerable fishing for smallmouth, largemouth and panfish. Although the South River supports some game fish, it is heavily polluted and the fish are unpalatable.

The North Fork Shenandoah River offers trout fishing in its headwaters and tributaries around Bergton and smallmouth and panfish from below Fulks Run to its mouth at Riverton. In the Woodstock area several small dams change the nature of this stream and many largemouth bass and crappie are taken. Float fishermen who are unfamiliar with the stream should check on the location of these dams. Few channel catfish are taken in the North Fork.

Three major tributaries of the North Fork furnish trout fishing. Big Stony with its tributary, Little Stony, provides trout fishing from the Liberty Furnace area to its mouth at Edinburg. Upper Cedar Creek and its tributary, Paddy Run, are stocked with trout. Smallmouth bass and panfish with an occasional trout are taken in lower Cedar Creek. Passage Creek flows between the North Fork and the South Fork and enters the North Fork near Waterlick. This stream is stocked with trout in the two sections on the George Washington National Forest.

In Frederick County, Opequon Creek offers trout fishing in its headwaters with smallmouth and panfish taken in its lower section.

In Page County, Cub Run with its tributary, Pitt Spring, furnishes trout fishing for a large number of people. About six miles of these streams are stocked on national forest land. There are unimproved campsites on the area and the roads are good. Cub Run enters the South Fork near Shenandoah, Virginia.

Shenandoah National Park, stretching from near Waynesboro on the south to near Front Royal on the north, contains numerous wild trout streams. These include Big Run and Broad Run on the west side and the Jordan, Rush, Thornton, Hughes, Robertson, the head of the Rapidan, the head of the forks of the Rivanna, and the head of the forks of Moorman's River to mention a few. Some of the streams that flow out of the park are stocked by the state below the park boundary. Fishermen should remember that inside the park a nine-inch size limit prevails with only artificial baits having one single hook permitted.

Lake Shenandoah, in Rockingham County, is a Commission-constructed public fishing pond presently managed for trout. This lake is about six miles from Harrisonburg on a good road. It contains approximately 39 acres with rental boats available. A limit of five trout prevails.

The area north and west of Bridgewater boasts several good trout streams having both stocked and wild trout available. The headwaters of the North River and its tributaries, Briary Branch and Dry River, plus other smaller streams are found here. Consult local game wardens or the Dry River district ranger's office for further details.

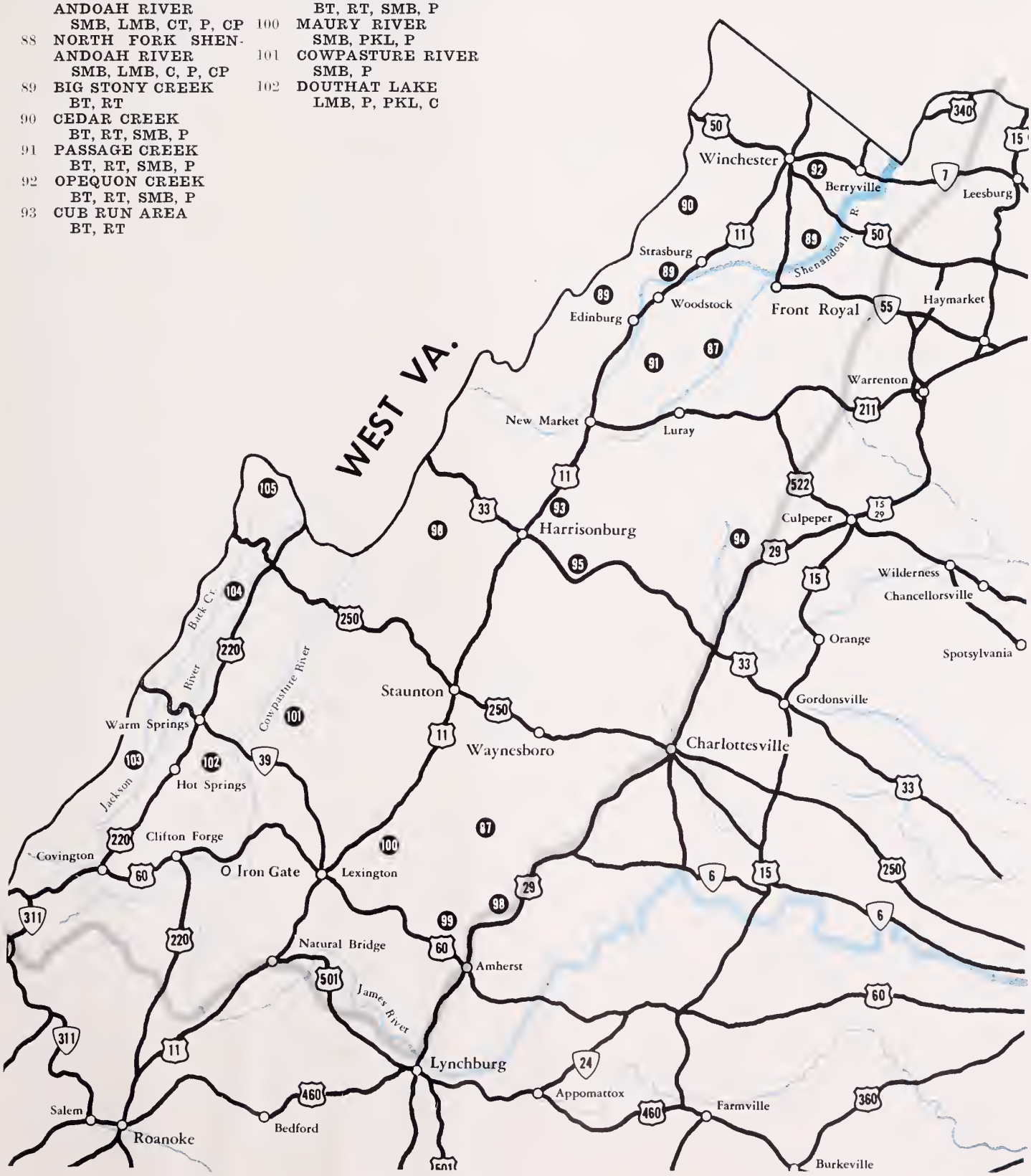
The Big Levels Game Refuge, George Washington National Forest, lies south of Stuart's Draft. It is drained by St. Mary's River, a good trout stream, plus John's Run, Kennedy Run, and Mill Creek. St. Mary's River is accessible all summer but the refuge roads to the smaller streams are closed July 1. Spring Pond, the nearest thing to a true bog in Virginia, is found in the refuge. Sherando Lake on upper Back Creek, a George Washington National Forest recreational lake, is on the Waynesboro side of the refuge. This 22-acre mountain lake is open to fishing from 8:00 a.m. to 8:00 p.m. and is stocked with trout. Improved campsites are available. Back

(Continued on page 24)

LEGEND

BT—Brook Trout
C—Crappie
CP—Carp
CT—Catfish
LMB—Largemouth Bass
P—Panfish (Sunfishes)
PKL—Pickerel
RT—Rainbow Trout
SMB—Smallmouth Bass

86 SHENANDOAH RIVER
SMB, LMB, CT, P, CP
87 SOUTH FORK SHENANDOAH RIVER
SMB, LMB, CT, P, CP
88 NORTH FORK SHENANDOAH RIVER
SMB, LMB, C, P, CP
89 BIG STONY CREEK
BT, RT
90 CEDAR CREEK
BT, RT, SMB, P
91 PASSAGE CREEK
BT, RT, SMB, P
92 OPEQUON CREEK
BT, RT, SMB, P
93 CUB RUN AREA
BT, RT
94 SHENANDOAH NATIONAL PARK
BT, RT
95 LAKE SHENANDOAH
BT, RT
96 UPPER NORTH RIVER AREA
BT, RT, SMB, P
97 BIG LEVELS REFUGE AREA
BT, RT, SMB, P
98 TYE RIVER AREA
BT, RT, SMB, P
99 PEDLAR RIVER AREA
BT, RT, SMB, P
100 MAURY RIVER
SMB, PKL, P
101 COWPASTURE RIVER
SMB, P
102 DOUTHAT LAKE
LMB, P, PKL, C
103 JACKSON RIVER
BT, RT, SMB, PKL, P
104 BACK CREEK
BT, RT, SMB, PKL, P
105 LAUREL FORK AREA
BT, RT



NORTHEAST FISHING (Continued from page 22)

Creek, near the village of Sherando, is stocked with trout by the Commission. To the south of the St. Mary's River area are Big Mary's Creek and South River, both stocked with trout.

The Tye River is a popular trout stream stocked by the state with wild trout abundant in the headwaters and tributaries. The same is true for the Rockfish and the Piney nearby. Smallmouth and panfish are taken in the lower stretches of the streams.

To the west of the Tye is the Pedlar, another favorite trout stream. In the same area are several other good trout streams—Irish Creek, Shoe Creek, North Fork Buffalo River, and Rocky Row Run. This area offers both wild and stocked trout. Local game wardens or the Pedlar district ranger's office at Buena Vista can furnish more detailed information.

Flowing through Lexington and entering the James near Glasgow is the North River or Maury's River. This stream produces some prize smallmouth bass plus panfish. Above Goshen it is called the Calfpasture. Some good trout fishing is available on the tributaries north of Goshen. Bratton Run is found near Goshen and Ramsey's Draft enters the Callpasture near Deerfield. Ramsey's Draft is accessible and open to the public for five miles on national forest land near West Augusta.

The Cowpasture River rises in Highland County and flows to the James near Iron Gate. This is a popular smallmouth, pickerel and panfish stream that can be floated with a light boat. A major tributary, the Bullpasture River, offers trout fishing and fine scenery in the gorge area. Smallmouth and panfish are taken downstream. Davis Run and Crab Run, tributaries of the Bullpasture, are stocked with trout.

Near Clifton Forge is Douthat State Park with Douthat Lake — public fishing for bass and bream with boats available. Wilson Creek, which feeds Douthat Lake, is stocked with trout in its left prong. Just to the west is Smith's Creek, which is stocked with trout.

The headwaters of the James River is known as the Jackson River from its origin in Highland County to the point where it meets the Cowpasture near Iron Gate. The upper section of the Jackson River in Bath and Highland Counties plus a tributary, Muddy Run, are stocked with trout. The lower section offers smallmouth, chain pickerel and panfish from about Bacova to Covington. This fine stream is heavily polluted for a considerable distance below Covington.

Back Creek rises just over the ridge from the origin of the Jackson. It follows a parallel valley until it joins the Jackson near Bacova. The upper section of Back Creek is stocked with trout. The lower section, known as Big Back Creek, provides smallmouth, pickerel and panfish. The fishing may be poor at times but the scenery is always good.

In the upper section of Highland County is Laurel Fork plus Crabbottom Creek and Strait Creek. These streams are stocked with trout and support wild trout populations. Laurel Fork offers good wild trout fishing in good wild country.

OUTDOOR EDUCATION (Continued from page 21)

on this subject lends itself to demonstration, but it would not be difficult for a whole class to participate. There are some good teaching aid references on this subject in most libraries:

Camp Cookery, Horace Kephart, $1.95
Jack-Knife Cookery, James A. Wilder, $2.75
The Complete Book of Outdoor Cookery, Helen Evans Brown and James Beard, Doubleday & Co., Inc., Garden City, N. Y., 1955
The Outdoor Picture Cookbook, Bob Jones, Hawthorn Books, Inc., N. Y., 1954
Aluminum Foil Booklet
Boy Scout Handbook, Boy Scouts of America

3. *Hiking and camping.* The last word has not been written on the perfect outfit for hiking and camping. Hunting trips mean lots of walking, and improper footwear can slow you down more than any other one thing. Most fishermen and hunters spend years perfecting their equipment. They try all makes and models of boots before they find what will suit them. They debate whether to buy leather boots or rubber thermal boots, or they buy both. What if they cannot afford either one? What then?

The same goes for camping gear. Camping in the summer, as compared with camping in the fall during deer season, requires a different assortment of bed clothing. Is there one bedroll suitable for both occasions? Should the sleeping bag be filled with down or dacron? By using nylon and dacron, and other so-called "miracle" cloth, and combining these with the thermal properties of other material, the outdoorsman can be comfortable in the coldest weather in gear that is amazingly light in weight.

What color clothing should be worn on a hunting trip, and what to wear to keep warm but still not be overdressed, are other important things to know. All these matters and many more could be taught in an outdoor education class.

* * *

Wildlife Conference Program Committee Meets

Spokesmen for practically all of the major national, state, federal, and Canadian conservation groups and agencies active in soil, water, wildlife, and forestry fields attended the recent program committee meeting for the 24th North American Wildlife Conference in Washington, D. C., according to the Wildlife Management Institute, sponsor of the annual international conservation meetings.

"Resources, People and Space" is the theme chosen for the forthcoming conference, which will be held March 2-4, 1959, in the Statler Hotel in New York City. Presentations will emphasize the need for proper natural resources management to meet the demands of a greatly enlarged human population.

First Land Donated for Key Deer Wildlife Refuge

The North American Wildlife Foundation has given the federal government the deed for the first land in the Florida Keys to be made part of the Key Deer National Wildlife Refuge, according to the Wildlife Management Institute.

The deed was presented to Secretary of the Interior Fred A. Seaton on April 30 by C. R. Gutermuth, secretary of the Foundation. It covers 15.5 acres of land on Big Pine Key which was selected by officials of the U. S. Fish and Wildlife Service as a headquarters site for the new wildlife refuge. The Foundation secured the donation of the land for the refuge from civic-minded people in Florida.

Hatchery Costs

The New Hampshire Fish and Game Department compiles an annual hatchery fish production report for the benefit of its Director. Other states also do this as routine administrative practice to see where they stand. The latest from New Hampshire covers 1957.

We were interested to learn what it costs to raise and stock trout in this traditionally trout-minded state. Considering only brook trout which are produced at nine state hatcheries, the grand average total cost per pound of trout raised and delivered into the various waters stocked figured out at about $1.30.

Costs varied for fish produced at individual hatcheries from a low of $1.01 to a high of $1.98 pound. Many factors account for variable costs from hatchery to hatchery.

Direct comparisons with reported costs in other states are not too helpful because there is no national standard cost accounting system in use. In a very few states (at least one anyhow) it may not even be known how many pounds of trout are actually produced! Only a few items contributing to total cost, such as labor and food, lend themselves to direct comparison.

We believe it's high time for fishery administrators to get together nationally and agree upon and follow a standard system of cost accounting of hatchery fish production.

"I can dream, can't I?"

Litterbug Problem

Cooperation is helping conquer the litterbug problem. The Texas Motel Association recently purchased 50,000 litterbags and they were distributed to incoming motorists at state entry points by the Texas Highway Department. In a later check, few litterbags were discarded. A similar program was initiated in the city of Houston. Two oil companies contributed 50,000 litterbags and distributed them through local stations.

McArdle Receives Career Service Award

Dr. Richard E. McArdle, chief of the U. S. Forest Service, has been chosen one of the ten outstanding career men in government service by the National Civil Service League. The award was announced at a presentation dinner in Washington, D. C., on April 29, the Wildlife Management Institute reports.

McArdle, a veteran of 20 years of government work, was selected from nearly 100 nominees from 31 federal agencies because of "his competence, efficiency, character, and continuity of service." He also was cited for "exceptional ability and professional competence in the career service" and his "ability to create friendly and effective cooperation between industry, the States, and the Federal Government." McArdle received the Department of Agriculture's Distinguished Service Award in 1957.

Let's Keep It Straight

The American public is the long-suffering victim of a widespread fallacy. It is that certain spectator sports are the chief competitors for the public's leisure time.

This is preposterous! We hope you'll forgive a few statistics but these are necessary to straighten out the facts.

The case for the spectator sports was summarized in Time for March 17, with statistics assembled by Triangle Publications (Morning Telegraph, Daily Racing Form). According to this source as related in Time, "horse parks with 53,820,958 customers, led all other competitors for the sportsman's spare time."

Baseball was second on the list with 32,512,503. Football was third, with

16,767,613, college and professional games combined.

We accept this on face value as the "pecking order" in spectator sports. But we can't accept the basic idea that any single spectator sport—or, indeed, all such sports combined—represent the chief competition for leisure time.

On the contrary, outdoor recreation — participation sports — is a far more popular means of utilizing leisure time. Findings of the NATIONAL SURVEY OF HUNTING AND FISHING in 1955, conducted by Crossley, S-D Survey, Inc. (New York), proved this.

Some 21,000,000 anglers alone, 12 years or older, spent about 400,000,000 days of their leisure time "out fishing." In addition, some 170,000,000 additional recreational-days were spent by hunters in pursuit of their quarry.

The figures indicate that sport fishing is the chief claimant of the sportsman's leisure. It consumes at least 7½ times as many recreational days annually as watching the ponies. It is refreshing to know that Americans by such overwhelming odds seem to prefer to "gamble" on hooking a fish on their day off. . . .

Taxidermy in Sight!

On a cold, windy, but clear afternoon my friend, Katharine, and I drove to a spot on the Chickahominy River about thirty-five miles from Richmond. We had fished here before, in milder weather, with reasonably good luck — often bringing back a string of crappies that made for good eating.

Katharine had recently taken an intense interest in fish taxidermy, and our problem at the moment was to catch a fish to mount, in spite of the fact that the weather was so much colder. Fall had passed into winter.

At the dam, when we got out of the car, the cold wind was blowing hard. The water was high and running over the dam where we usually fished, so we decided, with about everything against us, that we might just as well turn around and head for home.

On second thought though, after looking over the situation from the car window, it occurred to us that it might not be a bad idea to set out a line and watch it from our parked car. Having put out the bait and anchored the rod and reel with the minnow bucket, we could keep warm in the car and also watch the cork from the window. This we did.

For thirty minutes we talked and watched. It was less than half an hour before dark. *Then it happened!* The cork suddenly went down. I dashed out of the car to engage the fish on rod and reel. By the feel on the line, I knew that something large was on the end. Painstakingly I played the fish to the surface. When he rolled at this stage, I could clearly see that he was the largest pike we had seen anyone hook at the dam during the couple of months we had been fishing here.

The pickerel caught from the car window!

It would have been difficult to lift the fish over the dam's wall (about twenty-five feet high), so I played him about seventy-five feet to the bank.

By this time Katharine was beside me, with the enthusiastic shouts of a potential taxidermist: "Treat him gently. Don't hurt any of his scales!"

Once on the bank, I pulled him up to where I was standing. While I was playing him, Katharine said a little prayer that the fish would not be lost. It must have been answered, for when we got our hands on the fish we took him to the car and put him in a bucket for safekeeping.

He wasn't a monster or lunker size pike, but when we put him on the scales, he came to 2 lb. 14 oz. (21½" long, with a girth of 9¼") —an ideal size for mounting!

So the day ended with keen satisfaction for us—a thrill not to be forgotten!

—By A. LEROY MEARES, JR.

Roger T. Peterson Receives Distinguished French Award

On May 2 Roger Tory Peterson, world-famous naturalist, author, and editor of the widely used Peterson field guide series, flew to Paris to receive the Geoffroy Saint Hilaire Golden Medal from the Societe Nationale d'Acclimatation et de Protection de la Nature. This coveted award made annually to a top scientist or protectionist is "probably the highest recognition given by a scientific society." The Societe d'Acclimatation in France is to be compared to our National Audubon Society.

The Museum Nationale d'Histoire Naturelle commented: "This medal has been awarded to Roger T. Peterson for his wonderful work in the field of science, education and nature conservation, especially bird protection. His books, especially his field guides, have done more for a better knowledge of nature than any others, especially in France where his guide of European birds, translated into French, was tremendously successful. His paintings, photographs and films have been much appreciated everywhere. The Committee of the Society thinks that Dr. Peterson is one of those who did the most for nature conservation in the world."

Conservation Challenge

More than 100 species of wild creatures have died out in the past 150 years. This has become a matter of deep concern to the U. N. Educational, Scientific and Cultural Organization. Even worse, according to an Associated Press release from the United Nations, 600 more now seem doomed to extinction in the near future.

Man's activities are chiefly responsible. As we see it this is a clear case of "cutting off the nose to spite the face." The natural life that surrounds us is what makes human living worthwhile—indeed, possible.

Game Commission Photos by Kesteloo

Highlights of Conservation Essay Contest Ceremonies

The 1958 conservation essay contest grand prize winners pictured in the upper photo are (left to right) Front row—Beverly Waddill Carter, 6th grade, Battlefield Park School, Hanover Co.; Keith Shelton, 11th grade, Climax School, Pittsylvania Co.; Jackie Bailey, 5th grade, Lovingston Elementary School, Nelson Co.; Betty Hunter, 7th grade, Cismont School, Albemarle Co. Back row—Victor Gilly (dark suit), principal, Bland High School, Bland Co.; R. E. Lee Gildea, Jr., scholarship winner, 12th grade, Lane High School, Charlottesville; Kenneth Rea, 12th grade, John D. Bassett High School, Henry Co.; Fay Hope Perry, 10th grade, James Wood High School, Frederick Co.; Mary Sue Arnold, 9th grade, Fincastle High School, Botetourt Co.; and I. T. Quinn, executive director of the Virginia Commission of Game and Inland Fisheries, co-sponsor of the contest.

Lower left: Attorney General A. S. Harrison presents grand prize for 8th grade to Alice Elizabeth Schools from Marriott High School (King & Queen Co.). At the time of the presentation, Miss Schools was a patient at Richmond's Crippled Children's Hospital and attended the ceremonies in the Senate chamber on a stretcher.

Lower middle: Contest ceremony guests enjoyed a tour along Monument Avenue and North Boulevard in Richmond climaxed by a visit to beautiful Virginia House in Windsor Farms.

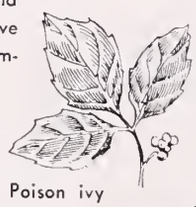
Lower right: Ross H. Walker, first Virginia state president of the Izaak Walton League of America and active member of the League, addresses luncheon guests in the Hunt Room of the Hotel Raleigh.

Summer Vacations
(AND ~ SOME ARE NOT!)

WATCH OUT!

Wood ticks

A little care and precaution will save you from these summer pests.



Poison ivy

Mosquitoes

For best midsummer fishing, try it early in the morning and late in the afternoon.

Enjoy the outdoors—but make sure your campfire is out—completely out—before you leave it.

Make it a "family" vacation. How about trying one of your state parks this summer?

On your "back to nature" vacation, don't forget these . . .

A good road map may save you time and trouble.

Was this a result of your vacation?

HELP KEEP VIRGINIA CLEAN AND GREEN